DEC 2 4 2014

Mr. Mark W. Maxwell
University of Iowa
200 USB
Iowa City, Iowa 52242

RE: Request for a Compliance Extension 40 CFR Part 63 Subpart DDDDD

Dear Mr. Maxwell:

This letter is in response to your request dated December 16, 2014, for a compliance extension for the University of Iowa's facility to comply with the Industrial, Commercial, and Institutional Boilers and Process Heaters (Boiler MACT). The Boiler MACT compliance date for University of Iowa's boilers 10 and 11 is January 31, 2016. University of Iowa has requested a compliance extension until September 30, 2016, according to the provisions under 40 CFR § 63.6(i), because University of Iowa asserts it needs additional time for the installation of controls.

The U. S. Environmental Protection Agency, Region 7, by this letter approves your request for a one-year extension of the compliance date with the Boiler MACT rule for the University of Iowa facility. Therefore, the approved compliance date for University of Iowa will be September 30, 2016.

Pursuant to 40 CFR § 63.6(i)(4)(i), the compliance extension must be incorporated into the Title V permit. Notwithstanding this extension of compliance for the provisions listed above, University of Iowa must meet all other applicable federal and state requirements. Pursuant to Section 113 of the Clean Air Act, University of Iowa may be subject to civil fines and penalties of up to $37,500 per day per violation, should compliance with 40 CFR Part 63 Subpart DDDDD not be achieved by the extended compliance date of September 30, 2016.

If you have any further questions regarding this compliance extension, please contact Lisa Hanlon at (913) 551-7599.

Sincerely,

Mark A. Smith, Chief
Air Permitting and Compliance Branch
Air and Waste Management Division

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Office	ACES	APCO
Name	Hanlon	Smith
Initial/Date	12/24/14	12/24/14

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

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Sincerely,

Ward A Burns

for Mark A. Smith, Chief
Air Permitting and Compliance Branch
Air and Waste Management Division

Smith, Kimberly E.

From: Hanlon, Lisa
Sent: Wednesday, December 24, 2014 10:12 AM
To: Smith, Kimberly E.
Subject: FW: University of Iowa boiler mact extension - For concurrence

Lisa Hanlon
U.S. EPA Region 7
Air Permitting and Compliance
11201 Renner Blvd.
Lenexa, KS 66219
913-551-7599
hanlon.lisa@epa.gov

From: Burns, Ward
Sent: Wednesday, December 24, 2014 10:09 AM
To: Hanlon, Lisa
Subject: RE: University of Iowa boiler mact extension - For concurrence

I concur for Mark.

Ward A. Burns, P.E.
Air Permitting and Compliance Branch
EPA Region 7
11201 Renner Boulevard
Lenexa KS 66219
Phone: (913) 551-7960
Fax: (913) 551-9960
http://www.epa.gov/region07/air/

From: Hanlon, Lisa
Sent: Wednesday, December 24, 2014 10:06 AM
To: Burns, Ward
Subject: FW: University of Iowa boiler mact extension - For concurrence

Hi Ward:
This is a boiler MACT extension letter to University of Iowa. Please reply to concur.
Thanks,
Lisa

Lisa Hanlon
U.S. EPA Region 7
Air Permitting and Compliance
11201 Renner Blvd.
Lenexa, KS 66219

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AWMD/APCO

December 16, 2014

Lisa Hanlon
U.S. EPA Region 7
Air Permitting and Compliance
11201 Renner Blvd.
Lenexa, KS 66219

Subject: University of Iowa Boiler MACT Compliance Extension Request for Boilers 10 and 11 (Plant # 52-01-005, Permit #'s 75-A-282-S4, 94-A-438-P2).

Dear Ms. Hanlon:

The University of Iowa is currently in the design phase of a project that will upgrade the pollution control equipment on two solid fuel boilers, Boilers 10 and 11, allowing them to meet the emissions requirements of NESHAP Subpart DDDDD. Emission testing on the two boilers has shown that, in their current configuration, these two boilers cannot meet the Boiler MACT emission limit for hydrochloric acid (HCl). The required compliance date for existing solid fuel boilers to meet the Boiler MACT emission limits for particulate matter, hydrochloric acid, mercury, and carbon monoxide, is January 31, 2016. 40 CFR 63.6(i) allows a facility to request an extension of up to one additional year to comply with the standard if controls need to be installed. This letter has been prepared to request such an extension. An extension is necessary to allow time to procure project funding, obtain air construction permits, allow for equipment delivery lead times, and to coordinate the construction schedule with boiler outages.

In 2013, the university carried out pilot tests to demonstrate that dry sorbent injection of lime into the flue gas streams of Boilers 10 and 11 would be effective in reducing HCl down to the established emission limits. Based on the successful pilot tests, dry sorbent injection was selected as the preferred technology to meet the Boiler MACT emission limits. Additionally, to prevent particulate matter emission increases related to the injected sorbent powder, the university has decided to replace Boiler 10's electrostatic precipitator (ESP) with a new baghouse system.

The main components that will be installed with the control systems for both boilers are as follows:

- 2, 10 foot diameter, 41 ton lime silos – Each boiler will have its own silo for lime storage.
- Two dust collectors for silo dust control – Each silo will have a dust collector on top for venting.

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- Boiler 10 baghouse – This is required to ensure compliance with PM standards following addition of sorbent injection and will reduce PM emissions below current emission rates.
- Sorbent piping and injection probes.
- Significant electrical system upgrades.
- Induced Draft (ID) fan for Boiler 10 – The new baghouse will result in an increase in differential pressure relative to the current ESP. A new, larger ID fan will be required to account for this increase in differential pressure.

The planned schedule for construction of the new control system, and compliance demonstration is as follows:

- August 1, 2014 through March 3, 2015 – Engineering design and bid document preparation.
- December 17, 2014 – Submit air construction permit application for the project to Iowa Department of Natural Resources (IDNR).
- January 20, 2015 – Formal request to Iowa Board of Regents for project funding.
- March 11, 2015 – Funding approved by Iowa Board of Regents.
- March 16, 2015 through March 31, 2015 – Project bidding.
- April 29, 2015 – Receive air construction permits from IDNR.
- April 30, 2015 – Contract Award for project.
- May 1 through June 15, 2015 – Develop final shop drawings
- June 15, 2015 – Order silo, baghouse, and ID fan equipment
- June 15 through November 20, 2015 – Demolition activities to prepare for new installations.
- October 23, 2015 through November 20, 2015 – Boiler 11 outage, final installation of Boiler 11 injection system.
- November 3, 2015 – Silo equipment, baghouse equipment, and ID Fan arrives. Begin construction.
- December 31, 2015 – Boiler 11 lime silo complete

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- January 31, 2016 – Boiler 10 lime silo complete

- March 14, 2016 through March 25, 2016 – Boiler 10 outage, final installation of Boiler 10 baghouse, ID fan, and injection system.

- April 30, 2016 – Complete Boiler 11 stack testing to show compliance with the MACT standard.

- June 30, 2016 – Complete Boiler 10 stack testing to show compliance with the MACT standard.

Due to uncertainties in the schedule proposed above, we are requesting approval to extend the compliance date for both boilers from January 31, 2016, to September 30, 2016. This will allow for unforeseen delays in the planned schedule, and will help ensure that we don't have to request an additional extension later.

Please contact me at 319-335-6185, or at mark-maxwell@uiowa.edu with any questions or concerns regarding this extension request.

Sincerely,

Mark Maxwell

Mark W. Maxwell
Environmental Engineer

cc: Brian Hutchins, Section Supervisor
Compliance & Monitoring
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Windsor Heights, IA 50324

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December 16, 2014

Lisa Hanlon
U.S. EPA Region 7
Air Permitting and Compliance
11201 Renner Blvd.
Mail Code: AWMDAPCO
Lenexa, KS 66219

Subject: University of Iowa Boiler MACT Compliance Testing for Hurst Boiler (Permit # 78-A-023-S7)

Dear Ms. Hanlon:

Enclosed with this letter please find results of emissions testing, performed by Mostardi Platt at the University of Iowa Oakdale Campus on November 4 and 5 of 2014. The purpose of the testing was to demonstrate compliance with NESHAP Subpart DDDDD requirements for this unit, while burning wood chips. Under the NESHAP rule, the Hurst Boiler is classified as a new, "stoker/sloped grate/others designed to burn wet biomass fuel." The initial attempt to show compliance for this unit took place in the summer of 2013. During that stack test the particulate matter (PM) emission limit could not be met, so the boiler has been limited to natural gas operation since that time. Following the 2013 test, the Tri-mer control device, which is used to control PM and NOx emissions from the boiler, was thoroughly inspected and cracked filters were found. These filters were replaced prior to carrying out the most recent testing.

The required testing included filterable particulate matter, carbon monoxide, mercury, and hydrogen chloride (HCl). Additional testing for nitrogen oxides was also performed to verify compliance with a state limit. The fuel used during the testing was wood chips. As can be seen in the test results summary table on page 1 of the report, the boiler tested below the NESHAP limits for HCl, mercury, carbon monoxide, and particulate matter. However during the final run of the carbon monoxide and mercury testing on November 5, the boiler tripped due to a wiring failure, and could not be immediately re-started as significant time was necessary for repair. As the test results show (on p. 6 of the report), the mercury and carbon monoxide limits were being met on the final run before the boiler tripped, and there are no indications that anything would have change during the remainder of the run. However, the final run was not included in averages shown in the summary table because it was not officially completed. We feel the testing was adequate to demonstrate that the boiler was in compliance with the NESHAP emission limits while burning wood chips.

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Please review the test report and provide feedback on the acceptability of this this testing for demonstrating compliance with the NESHAP Subpart DDDDD requirements. We plan to begin burning wood chips on a regular basis upon your approval.

Please contact me at 319-335-6185 with any questions or concerns.

Sincerely,

Mark Maxwell

Mark W. Maxwell
Environmental Engineer

enclosure

cc: Scott Postma, QSTO 1, 2, 3
Region VII, EPA
300 Minnesota Ave.
Mail Code: ENSVEFCB
Kansas City, KS 66101

Brian Hutchins, Section Supervisor
Compliance & Monitoring
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
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